

REMARKS

Applicants thank Examiner Horning for the interview conducted with the undersigned attorney on December 9, 2010. During the interview, the differences between ribose, 1', 2'-dideoxyribose and a 2'-deoxyribonucleotide were discussed.

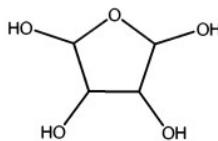
Rejection of Claim 25 Under 35 U.S.C. 102

Claim 25 is rejected under 35 U.S.C. 102 as being unpatentable over US Patent No. 5599707 ("Cook") as further evidenced by the instant specification and Stein and Cheng ("Stein"). Cook is relied upon as teaching introducing a 1', 2'-dideoxyribose into an immunostimulatory oligonucleotide. Applicants' specification is relied upon as teaching the structure of 1', 2'-dideoxyribose in Figures 1-3. Stein is relied upon as showing the structure of a phosphorothioate linkage in its Figure 1.

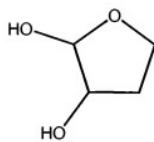
As discussed in the interview, what Cook and Stein both teach is a 2'deoxyribonucleotide phosphorothioate, in contrast to the claimed 1', 2'-dideoxyribose.

The structures of ribose, 1', 2'-dideoxyribose, and a 2'deoxyribonucleoside are shown here.

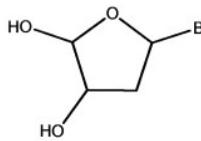
Ribose



1', 2'-dideoxyribose



2'deoxyribonucleoside



The 1' position is the first carbon atom clockwise from the ring oxygen. The 2' position is the second carbon atom clockwise from the ring oxygen. In ribose, the 1' and 2' positions are both substituted with hydroxy groups. In 1', 2'-dideoxyribose, the oxygen is removed from the 1' and 2' positions (hence "dideoxy"), and all that remains at the 1' and 2' positions are hydrogen atoms. In Cook and Stein, the oligonucleotides contain 2'-deoxyribonucleosides, in which the 1' position is substituted with a base, either adenine, cytosine, guanine, or thymine (shown both here and in Stein as "B"), while the 2' position is only hydrogen atoms.

Thus, clearly, neither Cook, nor Stein teaches the recited 1', 2'-dideoxyribose element of claim 25. Accordingly, Cook cannot anticipate claim 25. Therefore, Applicants respectfully request that this rejection be withdrawn.

CONCLUSION

In view of the above amendments and remarks, it is believed claim 25 is in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner believes that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned attorney at 207-791-3078.

Respectfully submitted,

Dated: December 13, 2010

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